

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~In a wireless communication system, a~~ A method for selectively combining a plurality of received transmissions from a plurality of respective signal sources to recover a message comprised of a plurality of frames, ~~the method~~ comprising:

processing each of the plurality of received transmissions from the plurality of respective signal sources separately to recover the message; and

if the message cannot be recovered error-free from a single received transmission,

determining erased frames in a message recovered from a first received transmission,

determining good frames recovered from remaining ones of the plurality of received transmissions,

forming at least one combined message, wherein each combined message includes a particular combination of good frames substituting for the erased frames, and

checking each combined message to determine whether it is good or erased.

2. (Currently Amended) The method of claim 1, wherein the first received transmission is one having a highest signal quality among the plurality of received transmissions.

3. (Currently Amended) The method of claim 1, further comprising:
checking each frame in the message recovered from the first received transmission; and
marking each frame failing the checking as an erased frame.

4. (Original) The method of claim 3, wherein each frame is checked based on a set of cyclic redundancy check (CRC) bits generated for the frame.

PATENT

5. (Original) The method of claim 1, wherein each combined message is checked based on a set of cyclic redundancy check (CRC) bits generated for the message.

6. (Currently Amended) The method of claim 1, wherein a single combined message is formed by

identifying each erased frame in the message recovered from the first received transmission,

identifying a good frame, from one of the plurality of received transmissions, corresponding to each erased frame, and

substituting each erased frame with the corresponding good frame to form the combined message.

7. (Original) The method of claim 1, wherein the good frame corresponding to each erased frame is identified based on a frame number associated with each frame.

8. (Currently Amended) The method of claim 1, wherein a plurality of combined messages are formed by

identifying a plurality of combinations of good frames for the erased frames in the message recovered from the first received transmission, and

substituting each combination of good frames for the erased frames to form a respective combined message.

9. (Currently Amended) The method of claim 1, further comprising:

if the message cannot be recovered error-free from a single received transmission and a good frame corresponding to a particular erased frame cannot be derived from a single received transmission,

combining symbols for two or more frames, from two or more received transmissions, corresponding to the erased frame, and

decoding the combined symbols to derive a good frame for the erased frame.

PATENT

10. (Currently Amended) The method of claim 9, further comprising:
if the message cannot be recovered error-free from a single received transmission and a good frame corresponding to a particular erased frame cannot be derived from a single received transmission,

ranking the plurality of received transmissions, and wherein symbols for frames corresponding to the erased frames are combined in a particular order determined based on the ranking of the plurality of received transmissions.

11. (Currently Amended) The method of claim 10, wherein the plurality of received transmissions are ranked based on their signal quality.

12. (Currently Amended) The method of claim 9, further comprising:
if the message cannot be recovered error-free from a single received transmission and a good frame corresponding to a particular erased frame cannot be derived from a single received transmission,

weighting symbols for each of the two or more frames corresponding to the erased frame based on a respective weight determined based on the signal quality of the two or more received transmissions from which the two or more frames are recovered, and wherein the weighted symbols are combined.

13. (Cancelled)

14. (Currently Amended) The method of claim 1, wherein each received transmission is a forward link signal from a respective base station in a CDMA system.

15. (Original) The method of claim 1, wherein the plurality of received transmissions are approximately synchronous.

16. (Original) The method of claim 1, wherein the plurality of received transmissions are asynchronous.

PATENT

17. (Original) The method of claim 1, wherein the message to be recovered error-free is a page message.

18. (Currently Amended) ~~In a CDMA communication system,~~ a method for selectively combining a plurality of non-synchronous forward link received transmissions from a plurality of respective signal sources to recover a page message comprised of a plurality of frames, the ~~method~~ comprising:

processing each of the plurality of non-synchronous forward link received transmissions from the plurality of respective signal sources separately to recover the page message; and

if the page message cannot be recovered error-free from a single received transmission,

determining erased frames in a message recovered from a first non-synchronous forward link received transmission, based on a set of cyclic redundancy check (CRC) bits included with each frame,

determining a good frame, recovered from one of the plurality of non-synchronous forward link received transmissions, for each erased frame,

forming a combined message by substituting each erased frame with a corresponding good frame, and

checking the combined message based on a set of CRC bits included with the message to determine whether it is good or erased.

19. (Currently Amended) A receiver unit in ~~a wireless communication system,~~ comprising:

a demodulator operative to receive and process a plurality of signal instances in a received signal to provide a plurality of symbol streams, each symbol stream corresponding to a respective received transmission from one of a plurality of respective signal ~~[[source]]~~ sources included in the received signal;

a decoder operative to process each of the plurality of symbol streams separately to recover a respective message comprised of a plurality of frames;

PATENT

a first detector operative to detect each frame in each recovered message as either a good frame or an erased frame;

a second detector operative to detect each recovered message as either a good message or an erased message; and

a frame assembler operative to form at least one combined message, if a message cannot be recovered error-free from a single symbol stream, wherein each combined message includes a particular combination of good frames substituting for erased frames in the message recovered from a first symbol stream, and

wherein the second detector is further operative to detect each combined message as either a good message or an erased message.

20. (Original) The receiver unit of claim 19, further comprising:

a frame buffer operative to store good frames recovered from the plurality of symbol streams.

21. (Original) The receiver unit of claim 19, wherein the decoder is further operative to combine symbols for two or more frames, from two or more symbol streams, corresponding to an erased frame, and to decode the combined symbols to derive a good frame for the erased frame.

22. (Original) The receiver unit of claim 21, further comprising:

a symbol buffer operative to store symbols corresponding to each erased frame in the message recovered from the first symbol stream.

23. (Original) The receiver unit of claim 19, wherein the first and second detectors are cyclic redundancy check (CRC) checkers.

24. (Original) The receiver unit of claim 19, wherein the message to be recovered error-free is a page message.

25. (Original) A terminal in a CDMA system comprising the receiver unit of claim 19.

PATENT

26. (Currently Amended) A digital signal processor ~~in a wireless communication system~~, comprising:

means for processing a plurality of signal instances in a received signal to provide a plurality of symbol streams, wherein each symbol stream corresponds to a respective received transmission from one of a plurality of respective signal ~~[[source]]~~ sources included in the received signal;

means for decoding each of the plurality of symbol streams separately to recover a respective message comprised of a plurality of frames;

means for detecting each frame in each recovered message as either a good frame or an erased frame;

means for detecting each recovered message as either a good message or an erased message; and

means for forming at least one combined message, if a message cannot be recovered error-free from a single symbol stream, wherein each combined message includes a particular combination of good frames substituting for erased frames in the message recovered from a first symbol stream, and wherein each combined message is detected to determine if it is a good message.

27. (Currently Amended) A receiver apparatus ~~in a wireless communication system~~, comprising:

means for processing a plurality of signal instances in a received signal to provide a plurality of symbol streams, wherein each symbol stream corresponds to a respective received transmission from one of a plurality of ~~[[a]]~~ respective signal ~~[[source]]~~ sources included in the received signal;

means for decoding each of the plurality of symbol streams separately to recover a respective message comprised of a plurality of frames;

means for detecting each frame in each recovered message as either a good frame or an erased frame;

PATENT

means for detecting each recovered message as either a good message or an erased message; and

means for forming at least one combined message, if a message cannot be recovered error-free from a single symbol stream, wherein each combined message includes a particular combination of good frames substituting for erased frames in the message recovered from a first symbol stream, and wherein each combined message is detected to determine if it is a good message.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.